UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,775	11/20/2003	Michael L. Lightstone	NVID-082/00US 140060-2158	2892

23419 7590 11/24/2008

COOLEY GODWARD KRONISH LLP
ATTN: Patent Group
Suite 1100
777 - 6th Street, NW
Washington, DC 20001

EXAMINER	
TANG, KENNETH	

ART UNIT	PAPER NUMBER
2195	

MAIL DATE	DELIVERY MODE
11/24/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/719,775	LIGHTSTONE ET AL.	
	Examiner	Art Unit	
	KENNETH TANG	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 September 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,7,13-16,21 and 22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,7,13-16,21 and 22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 7, 13-16, and 21-22 are presented for examination.

2. This action is in response to the Amendment on 9/29/08. Applicant's arguments have been fully considered but were not found to be persuasive. Applicant's amendment to the claims prompted new grounds of rejections.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

4. Claim 1 is objected to because of the following informalities:

- In line 2, "adjustable video encoder program" should be amended to – adjustable software video encoder program" in order to maintain consistency in the claim language.
- In line 3, "adjustable software program" should be amended to – adjustable software video encoder program – in order to maintain consistency in the claim language.
- In line 6, "utilization said" should be amended to – utilization, said – in order to correct the grammatical error.

5. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 7, 13-16, and 21-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. In claim 1 (last limitation), "selecting a performance level to achieve a highest possible video quality while maintaining IC processor utilization of said video encoder within a desired range having a minimum IC processor utilization and a maximum IC processor utilization to maintain an idle thread utilization sufficient to permit another software program to load and execute." is a run-on sentence and grammatically incorrect. The scope cannot be ascertained and the claim is found to be indefinite.

8. Claims 15 and 21-22 are rejected for the same reasons as stated in the rejection of claim 1.

9. Claims 7, 13, and 16 are also rejected as being dependent upon rejected claims 1 and 15.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1, 7, 13-16, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kressin (US 6,535,239 B1) in view of Morozov et al. (hereinafter Morozov) (US 2004/0161034 A1), and further in view of Banerjee et al. (hereinafter Banerjee) (US 7,363,369 B2).

11. As to claim 1, Kressin teaches a method of managing utilization of an integrated circuit (IC) processor, comprising:

monitoring processor utilization (CPU usage) by an adjustable software video encoder program running on a first thread, the adjustable video encoder program having at least two different performance levels associated with data processing quality of said adjustable software program (varying the rate at which video images are compressed - video frame rate - in order to maintain a target level of CPU resource usage), wherein each performance level has a different associated IC processor utilization, said performance levels comprise encoding levels (varying levels) of the video encoder (video encoder 356) affecting video quality where each encoding level corresponds to an encoder configuration (col. 1, lines 56-64); and

selecting a performance level to achieve a highest possible video quality while maintaining IC processor utilization (a rate is selected to maintain a target threshold of processor resource usage) of said video encoder (see Abstract, col. 1, lines 55-67, col. 2, lines 1-15).

12. Kressin is silent in teaching that the maintaining of the processor utilization is done within a desired range having a minimum IC processor utilization and a maximum IC processor (see Abstract). However, Morozov teaches video encoding that adjusts the encoding controls to maintain a utilization range consisting of a utilization minimum and a utilization maximum

([0026] and [0046]). Kressin and Morozov both are attempting to find the optimum balance between maintaining visual quality and reducing the amount of information necessary for displaying a video. Therefore, one of ordinary skill in the art would have known to modify the video encoding means of Kressin such that it would maintain utilization within a desired range of a minimum utilization and a maximum utilization, as taught in Morozov. The suggestion/motivation for doing so would have been to provide the predicted result of a smooth bit utilization with perceptual integrity (last sentence of [0026]). Kressin in view of Morozov is silent in teaching maintaining an idle thread utilization sufficient to permit another software program to load and execute. However, Banerjee discloses dynamically increasing/decreasing threads within a defined load/utilization range and monitoring thread usage such that sufficient idle threads are maintained so that wait times are not prohibitive for new services to be executed (col. 1, lines 59-67 through col. 2, lines 1-10). One of ordinary skill in the art would have known to modify Kressin in view of Morozov's networked data processing system such that it would include monitoring thread usage such that sufficient idle threads are maintained such that wait times are not prohibitive for new services to be executed, as taught in Banerjee. The suggestion/motivation for doing so would have been to provide the predicted result of preventing unacceptable wait times for new programs to execute (col. 1, lines 59-67). Therefore, it would have been obvious to one of ordinary skill in the art to combine Kressin, Morozov, and Banerjee to obtain the invention of claim 1.

13. As to claim 7, Kressin teaches further comprising: measuring IC processor utilization for each of said performance levels to determine a relationship between performance level and IC

processor utilization (processor utilization is dynamically measured as the performance level is dynamically altered) (col. 2, lines 1-34). One of ordinary skill in the art would know that a higher quality video, for example, would require greater processor utilization, while a lower quality video would require less processor utilization.

14. As to claim 13, it is rejected for the same reasons as stated in the rejection of claim 3.

15. As to claim 14, Kressin, Morozov, and Banerjee teach further comprising: having a performance level with a processor utilization below a maximum IC processor utilization by a sufficient margin to accommodate differences in processor performance of at least two different types of IC processors (see rejection above). Kressin, Morozov, and Banerjee is silent in having a startup mode that selects a startup performance level that would start the processor utilization below the maximum IC processor utilization. However, it would have been obvious to one of ordinary skill in the art to have another software program to start or execute at a utilization that is within the utilization range of Kressin, Morozov, and Banerjee because it would provide the predicted result of allowing for workable initial conditions that allow for optimizing performance.

16. As to claim 15, it is rejected for similar citations and teachings as stated in the rejection of claim 1.

17. As to claim 16, Banerjee teaches wherein said minimum idle thread utilization is maintained until other of said software programs have a processor CPU utilization greater than a threshold utilization (col. 1, lines 59-67 through col. 2, lines 1-10).

18. As to claims 21-22, they are rejected for the same reasons as stated in the rejections of claims 1 and 15, respectively.

Response to Arguments

19. During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

20. Applicant's amendment to the claims prompted new grounds of rejections that make the Applicant's arguments moot.

21. Applicant also argues that Kressin does not teach different video encoding levels.

The Examiner respectfully disagrees. Kressin teaches a video encoder 356 dynamically varying the rate at which video images are compressed (video frame rate) in order to maintain a

target level of CPU resource usage (col. 1, lines 55-65). This variation of the video frame rate is a variation of different encoding levels. If there weren't different video encoding levels, this variation of the video compression would not occur. Therefore, Kressin does teach different video encoding levels.

22. *Applicant also argues that Kressin does not maintain sufficient processor resources to permit a second program to load and execute.*

In the current office action, the Examiner acknowledges this but relies on Banerjee in a 35 USC 103 rejection to teach that limitation. Applicant's argument is moot in view of the new grounds of rejections.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KENNETH TANG whose telephone number is (571)272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/
Supervisory Patent Examiner, Art Unit 2195

/Kenneth Tang/
Examiner, Art Unit 2195